



The Ecuadorian Universities and the Work for Sustainability



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Article history:

Received: 18 November 2017

Accepted: 30 January 2017

Published: 31 March 2017

Keywords:

Environmental legislation;

Environmental;

Pedagogical models;

Quality of education;

Sustainability;

Abstract

At work, a reflection on the environmental management of the Ecuadorian university and prospects of its development from the model of quality of higher education which promotes Ecuador and the applicable law is addressed. It is intended to address a reflection of the history of the environmental management of Ecuadorian universities so that they can benefit from the experiences in building a new model to move towards an integrated social and economic interest's environmental management to ensure the sustainable development.

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1. Introduction

In the Constitution of 2008, Ecuador establishes the political will of the nation to legally recognize the rights of nature, orienting efforts towards the integral respect of their existence, their maintenance and the regeneration of their life cycles and evolutionary processes. This proposal is framed within a context in which government management is oriented towards compliance with the principles and rights of Good Living (Chacón *et al.*, 2009). Within these, interculturality and harmonious coexistence with the natural environment, with a shift in the predominant nature vision, erroneously understood by some only as a resource provider, are a more integral and biocentric approach, in which Nature is defined as "space where life is realized".

The Government Program 2013-2017 in the section Ecological Revolution, bets on the transformation of production under an eco-efficient model with greater economic, social and environmental value. In this sense, the conservation and sustainable use of heritage and natural resources, the insertion of environmentally-friendly

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technologies, the application of energy efficiency and a greater participation of renewable energies, as well as the prevention, control and Mitigation of pollution and sustainable production, consumption, and post-consumption. The public environmental policy promotes the conservation, valuation and sustainable use of natural heritage, ecosystem services and biodiversity (Constituyente, 2008).

2. Materials and Methods

The work is descriptive with the use of methods: documentary analysis, analysis, and synthesis in the revision of assumptions, as well as the historical-logical in the exhibition of ideas.

The inductive-deductive method to arrive at precise conclusions starting from the study and analysis of particular premises related to the role that the university can play in the achievement of sustainability.

The sources consulted constitute the authoritative vision of authors, agencies, and associations such as the Legislative Branch of the Ecuadorian State; And the Project of Structuring of the National System of Evaluation and University Accreditation.

3. Results and Discussions

At present, the importance that society attaches to the problems related to sustainability and the Ecuadorian state strives to strengthen the role of teachers and other professionals in education, as key players in the construction of Good Living, concentrating the Actions for the achievement of a set of objectives that are integrated with the environmental and socio-economic interests of sustainable development (Constituyente, 2008). Figure 1 shows the integrated framework of objectives of Sustainable Development in Higher Education in Ecuador.

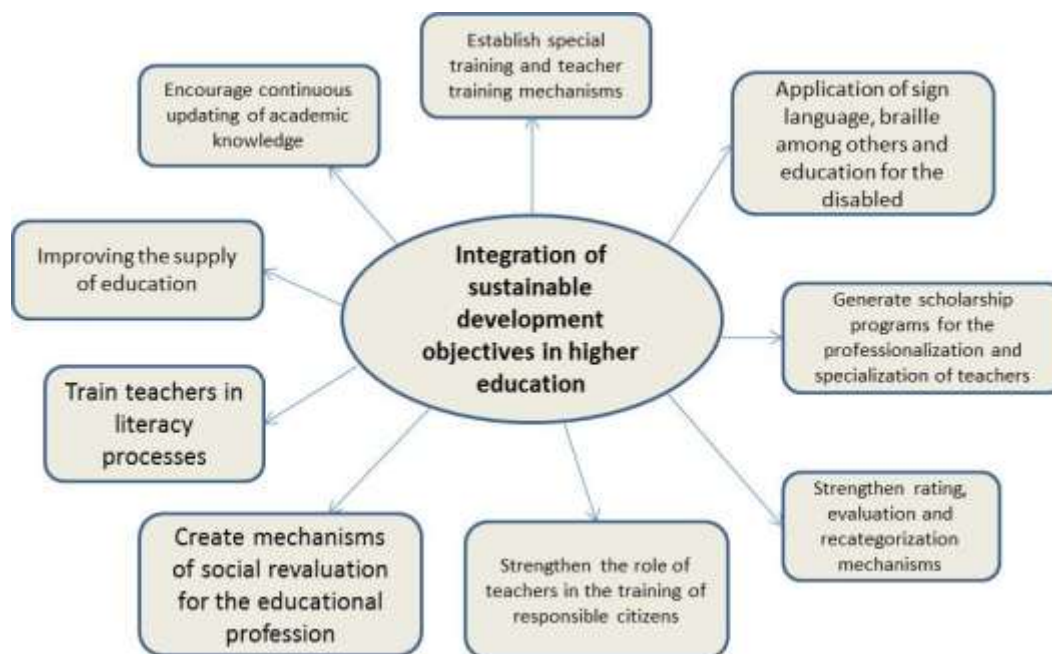


Figure 1. Integrated sustainable development objectives scheme

The objectives involve a set of actions and tasks that are part of the institutionally prioritized plans and which should lead to the achievement of the sustainability of the teaching and academic process in the higher education centers of the country.

The improvement of the offer of education represents the constant improvement of the training of teachers and other professionals in the framework of a comprehensive, inclusive and intercultural education; Promoting the continuous updating of academic knowledge implies the promotion of constant updating of the technical preparation

of teachers and the strengthening of their pedagogical capacities for the integral development of the student; Establish special training and teacher training mechanisms for the application of education in ancestral languages and in the management of principles and knowledge of peoples and nationalities within educational programs; The application of sign language, Braille, among others and education for the disabled, implies the establishment of training and teacher training mechanisms and pedagogical models that allow it to fulfill the purposes drawn to educators; To train teachers in the processes of literacy, post literacy and digital literacy, taking into account educational resources by age; Generate scholarship programs for the professionalization and specialization of teachers and other professionals in education; Create mechanisms that allow the educational professionals to be revalued socially and economically; Strengthen the mechanisms of qualification, evaluation and continuous re-categorization of teachers and other education professionals in function of their performance;

Strengthen the role of teachers in the formation of responsible citizens with cultural, material and immaterial heritage and natural heritage and committed to a sustainable model of life.

Ecuador intends to continue to maintain international leadership in the universalization of the rights of nature and the consolidation of innovative environmental proposals to face climate change, with an emphasis on principles of co-responsibility, such as the Yasuní Initiative (The Yasuní-ITT Initiative is an ambitious environmental project that proposes to stop exploiting a large oil field located in one of the Ishpingo-Tambococha-Tiputini areas, equivalent to 20% of Ecuador's oil reserves located in the National Park Yasuní in the Ecuadorian Amazon), The avoided net emissions mechanisms (It is a proposal made by Ecuador within the mechanisms of protection of biodiversity at the global level and consists of compensations to the countries that maintain the forests in order to avoid the storage of large amounts of carbon) And the Daly-Correa tax. This latest initiative aims to curb carbon dioxide emissions and at the same time finance poverty reduction and the sustainable energy transition. It can also serve to compensate governments and local communities for their efforts to conserve the ecosystems of extreme biodiversity that operate as natural carbon sinks, such as tropical forests (de Cuba, 1997).

3.1 Environmental management and sustainability in universities

It can be understood by environmental management the set of activities, mechanisms, and instruments, aimed at ensuring the management and rational use of natural resources through conservation, improvement, rehabilitation and environmental monitoring, as well as the control of human activity (Martínez, 2004).

Although neither the concept of sustainability nor the concept of sustainable development currently has a global consensus, there is a need to interpret a priori and offer a conceptual idea on what could be understood as sustainable development, and can be defined as the upper stage of progress Of environmental management, when a proper balance has been reached between environmental, economic and social interests, so as to halt and reverse the present serious problems of social, economic and environmental degradation.

The paradigm of sustainable development is now a consistent and hopeful alternative to the current crises, in which a reorientation of the economic and technological models inspired by cultural and axiological paradigms that overlap exclusively anthropocentric approaches is promulgated.

At present, it is not possible to achieve the sustainability of the life of society, without the application of some model of environmental management, which is achieved with the use of certain tools that allow it to become reality (Ortiz-Chávez *et al.*, 2015)

The university community must become the main player in the generation of models of sustainability management since the university is a medium in which people carry out various activities that have well defined and defined consequences for society.

Beyond any consideration, the university as an institution dedicated to the contribution of knowledge and techniques through research and teaching should play a leading role in the dissemination of possible solutions and alternatives to the problems of sustainability that are Facing current society. The experiences and experiences of people belonging to the university community are important for the development and construction of their scales of values and social behaviors.

In the environmental management of universities, contributions have been made, but it is necessary to integrate the elements of sustainability, directing them towards local development from the environmental dimension, which will be very difficult to achieve without a well-integrated management system, achieving the transition to styles of life novel and respectful with nature.

3.2 The quality of higher education in Ecuador

At the UNESCO regional conference held in Havana in 1996 on the Quality of Higher Education, it was suggested that quality could be defined as the adequacy of the being and the task of higher education, should it be (Constituyente, 2008; de Cuba, 1997).

The quality of higher education is a multidimensional concept, which includes universal and particular characteristics that allude to the nature of institutions and to the problems that arise in relation to different social contexts within the framework of national, regional and local priorities.

The quality of higher education appears linked to a current problem of extreme complexity; from which it can be argued that environmental problems cannot be excluded (Constituyente, 2008).

Article 75 of the Political Constitution of Ecuador contains the main functions of the universities and polytechnic schools of the country, in order to contribute to the creation of a new and more just Ecuadorian society, with specific methods and orientations for the fulfillment of those ends. Figure 2 shows the functions expressed in the constitution.

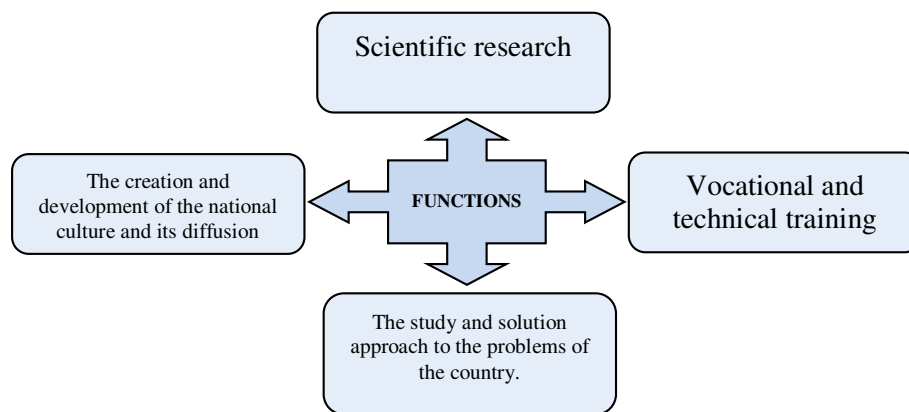


Figure 2. Main functions of universities and polytechnic schools (Chacón et al., 2009)

From the point of view of its training, the university must have the responsibility of forming an integral professional, capable of analyzing and assuming its responsibilities in the economic, social and environmental orders.

In order to have quality professional training in Ecuador, innovative, flexible and dynamic proposals for professional and post-vocational training are required, in accordance with the demands of national development, to effectively link teaching, research, and social interaction. Integrate scientific-technical training and humanistic training, fostering the cultivation of ethical values such as honesty, responsibility, equity, and solidarity, so necessary at this time in our society, for it is necessary to base the curricula with the research of the needs of the Social development and professional practice (Vivir, 2013).

The research needs to be assumed as the institutional activity oriented to the inquiry, study, knowledge of reality, systematization of this knowledge and its use to satisfy needs and contribute to solving the problems that the country has. This means that in all universities without distinction, research is considered as the main activity directly linked to the curriculum of each career and not as an exclusivist function of some elite universities.

Higher education institutions should develop research programs, setting the priority lines to be implemented through the institutes, centers and/or research departments of their academic units. These lines will be related to the vision and mission of the University in function of the solution of problems in the local, regional and national orders, contributing therefore to the institutional development and a broad social project that contributes to the construction of a country that is it develops autonomously and sustainably at the expense of its resources.

Institutions should interact with other actors in Ecuadorian society through the provision of specialized services such as continuing education, consultancy and consultancy related to local, regional and national development, higher education institutions should also contribute through different actions in the preservation, Dissemination, and enrichment of culture and constitute the ideal space for the analysis and debate of serious national problems, with the aim of guiding public opinion and favoring the proposal of alternative solutions that benefit the majority.

Universities must achieve and demonstrate a solid environmental performance by controlling the impact of their activities, products, and services, in accordance with their policy and objectives. They do so in the context of increasingly demanding legislation, economic policy development and other measures to promote environmental protection and increased social concern for environmental issues, including sustainable development (Vilches & Pérez, 2012).

All of the above supposes for the Higher Education System of the country that the adequacy of the economic model leads to a new way of thinking and acting with respect to environmental management and must consider the environmental aspects associated with the academic pursuit of sustainability

A sustainable university has to be based on a conception that harmonizes the quality of the teaching process and the services that it offers, with the minimum environmental impact and consumption of resources. At the same time, the materialization of this conception needs to be based on a structured deployment of environmental management tools that allow its practical implementation and facilitate its evolution and continuous improvement in order to approach the model proposed by the country.

The above aspects reflect the importance of environmental management, taking into account that it is a management function for universities, constituting a strategic dimension that ensures the most appropriate way of conceiving the environment from a sustainable perspective (interrelation between environmental, Social and economic) and how it is managed, within a country that fights for the dream of a just, solitary and economically successful society.

4. Conclusion

The quality of higher education is a multidimensional concept, which includes universal and particular characteristics that allude to the nature of institutions and to the problems that arise in relation to different social contexts within the framework of national, regional and local priorities. Nothing prevents Ecuadorian universities from embarking on the road to sustainability.

The sustainable organization has to be based on a conception that harmonizes the quality of the teaching and research process, the economic-social management and the environmental protection of the institution and its surroundings.

The adaptation of the sustainability of the Ecuadorian universities is a new way of thinking and acting in terms of environmental management and demands a new model.

Conflict of interest statement and funding sources

The authors declared that they have no competing interest. The study was financed by personal funding.

Statement of authorship

The authors have a responsibility for the conception and design of the study. The authors have approved the final article.

Acknowledgments

The authors thank the administrative management of Universidad Técnica de Manabí for their support in carrying out their research in the different areas of work.

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